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D.W.

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/607,674      | 09/21/2005  | Hsing Kuang Lin      |                     | 8024             |

7590  
Hsing Kuang Lin  
2143 Bridgewater Drive  
Fairbanks, AK 99709-4104

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| EXAMINER |
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WYSZOMIERSKI, GEORGE P

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1742

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



Application No.

10/607,674

Applicant(s)

LIN ET AL.

Examiner

George P. Wyszomierski

Art Unit

1742

**Office Action Summary**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/25/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

1. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available on the USPTO Internet web site <http://www.uspto.gov> in the Site Index under "Attorney and Agent Roster." Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U. S. Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450

2. The substitute specification filed October 3, 2003 (including Abstract, Claims, and Drawings) has been entered into the file.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) The present specification and claims use the terms absorb and adsorb (and their derivatives) interchangeably. For example, step (a) of claim 1 recites "adsorbing dissolved

Art Unit: 1742

species...using an absorbent". The terms "absorbing" and "adsorbing" describe two distinct chemical processes, and a reading of the specification and claims would not allow one to determine which of these processes occurs in the invention as disclosed and claimed. Thus it is unclear what processes would or would not fall within the scope of the present claims.

b) In claim 1, step (b), "the loaded absorbent" lacks proper antecedent basis.

c) In claim 3, it appears that the word "includes" should be changed to read "is selected from the group consisting of".

5. The prior art noted on the attached PTO-892 and 1449 forms is of interest. This art does not appear to disclose or suggest a process as defined in the present claims.

With respect to the references cited on the PTO-1449 form, the examiner notes that only the Abstracts have been considered, as that is the only portion of the references supplied by Applicant.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

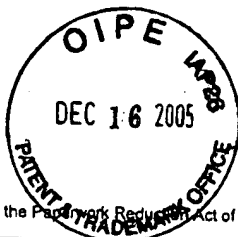
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective July 15, 2005, all patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*George Wyszomierski*  
GEORGE WYSZOMIERSKI  
PATENT EXAMINER  
ART UNIT 1700

GPW

September 16, 2005



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Approved for use through 05/31/2003. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

|   |   |                          |                 |
|---|---|--------------------------|-----------------|
| Substitute for form 1449B/PTO   |   | <b>Complete if Known</b> |                 |
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   | Application Number       | LW2003/01       |
|   |   | Filing Date              | 06/27/2003      |
|   |   | First Named Inventor     | Hsing Kuang Lin |
|   |   | Art Unit                 | 1742            |
|   |   | Examiner Name            | WYSZOMIERSKI    |
| Attorney Docket Number  |   |                          |                 |
| Sheet   | 1 | of                       | 1               |

### NON PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|--------------------|-----------------------|---|----------------|
| Gu                 |                       | H. CAI et al., 1998, Generation of metal nanoparticles by laser ablation of microspheres, Journal of Aerosol Science, vol 29, no 5-6, pp627-636. (Abstract only)  |                |
| Gu                 |                       | K. ESUMI et al., 2000, Role of polyamidoamine dendrimers for preparing nanoparticles of gold, platinum and silver, Langmuir, vol 16, no 6, pp2604-2608. (Abstract Only)   |                |
| Gu                 |                       | K. Esumi, et al., 2000, Spontaneous formation of gold nanoparticles in aqueous nanoparticles in aqueous solution of sugar-persubstituted polyamidoamine dendrimers, Langmuir, vol 16, no 6, pp2978-2980. (Abstract only)  |                |
| Gu                 |                       | F. Grohn et al., 2001, Nanoparticle formation within dendrimer-containing polymer networks: Route to new organic-inorganic hybrid materials, Macromolecules, vol 34, no 7, pp2179-2185. (Abstract only)   |                |
| Gu                 |                       | S. RAVAIINE et al., 1998, PH6Y6chemical generation of gold nanoparticles in Langmuir-Blodgett films, Langmuir, vol 14, no 3, pp708-713. (Abstract only)   |                |
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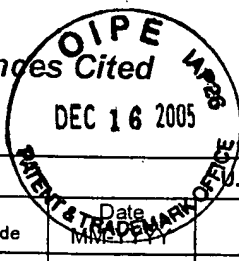
|                    |                    |                 |         |
|--------------------|--------------------|-----------------|---------|
| Examiner Signature | <i>Gu, Ullmann</i> | Date Considered | 9/16/05 |
|--------------------|--------------------|-----------------|---------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

# Notice of References Cited



Application/Control No.

10/607,674

Applicant(s)/Patent Under  
Reexamination  
LIN ET AL.

Examiner

George P. Wyszomierski

Art Unit

1742

Page 1 of 1

## U.S. PATENT DOCUMENTS

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name          | Classification |
|---|---|--|-----------------|---------------|----------------|
|   | A | US-6,228,334                                     | 05-2001         | Hill et al.   | 423/25         |
|   | B | US-6,686,308                                     | 02-2004         | Mao et al.    | 502/180        |
|   | C | US-2003/0216256                                  | 11-2003         | Axtell et al. | 502/417        |
|   | D | US-  |                 |               |                |
|   | E | US-  |                 |               |                |
|   | F | US-  |                 |               |                |
|   | G | US-  |                 |               |                |
|   | H | US-  |                 |               |                |
|   | I | US-  |                 |               |                |
|   | J | US-  |                 |               |                |
|   | K | US-  |                 |               |                |
|   | L | US-  |                 |               |                |
|   | M | US-  |                 |               |                |

## FOREIGN PATENT DOCUMENTS

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|--|-----------------|---------|------|----------------|
|   | N |  |                 |         |      |                |
|   | O |  |                 |         |      |                |
|   | P |  |                 |         |      |                |
|   | Q |  |                 |         |      |                |
|   | R |  |                 |         |      |                |
|   | S |  |                 |         |      |                |
|   | T |  |                 |         |      |                |

## NON-PATENT DOCUMENTS

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
|   | U |   |
|   | V |   |
|   | W |   |
|   | X |   |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



December 16, 2005

Mr. George Wyszomierski  
Commissioner for Patents  
U.S. Patent and Trademark Office  
U.S. Department of Commerce  
P.O. Box 1450  
Alexandria, VA  
22313-1450

Dear Mr. Wyszomierski:

Per the accompanying Office Action Summary (OAS) dated 09/21/2005, Dr. Lin. and I have made changes to our patent application (10/607,674) that we believe address all of the issues raised in the OAS. Please contact us with any additional questions or suggestions.

Sincerely,

Daniel E. Walsh